Amendment of the Drawings

Please amend the drawings by replacing the sheet containing Figure 6 with the enclosed Replacement Sheet. The amendment of Figure 6 involves replacing the reference numerals that were inadvertently omitted on the replacement sheet submitted with the Amendment filed on June 13, 2006. No new matter is added by the amendment of the drawings.

REMARKS

The Claims

Claims 1-10 and 16-20 are pending in this application. Claims 11-15 are withdrawn from consideration as being directed to a non-elected invention. Claims 3-10 and 16-20 were objected to, but were indicate to be allowable if rewritten in independent form.

The Rejection

The Examiner rejected Claims 1 and 2 under 35 USC 102(b) as being anticipated by the description of the background of the present invention as set forth in at pages 1-10 and in Figures 1-6 of the present application. Applicant respectfully traverses this rejection for the following reasons.

The Applicant's claimed magnetron RF radiation suppressor as set forth in Claim 1 includes two components. The first component is an inner sleeve member made of an electrical insulating material. The second component is an outer shell assembled to the inner sleeve member. The outer shell member is made of a material that absorbs radio-frequency radiation.

The known magnetron RF radiation suppressor that is described in the Background section of this application is formed in the shape of an annular collar piece as shown in Fig. 5 of the present application. The known RF suppressor is a unitary body made of a single material, a molded epoxy binder material that has iron particles suspended therein. That material provides good RF radiation absorption. However, as also described in the Background section of the application, the known RF radiation suppressor is subject to damage resulting from very high electric field intensities that can breakdown the RF absorbing material. Once voltage breakdown has been initiated

in the RF suppressor material, it contributes to an avalanche effect in which a small electric arc travels through the suppressor and a plasma is formed in the air surrounding the suppressor. The arc enlarges, ionizing the air, and forms a conducting channel that extends from the cathode terminal on the magnetron to a grounded surface in the vicinity of the suppressor that may include the external magnet pole piece, coolant water tubes, or some other grounded structure in the RF shield cabinet where the magnetron is stationed. Although the arc is eventually extinguished when the over-current protection device on the cathode power supply shuts the cathode voltage supply off, significant damage will still have occurred to the suppressor material. Failed suppressors are frequently charred or otherwise burned in an area where the suppressor contacts the high-voltage cathode supply terminal, or else along the inner surface of the suppressor annulus in the vicinity of the magnetron cathode contact. The damage to the RF suppressor will also typically include a punch through characterized by a perforation of the RF suppressor along the radial direction. A hole may be completely burned through the RF suppressor from its inner surface to its outer surface, or there can be a partial punch-through hole where material is visibly ablated mostly from the outer surface of the RF suppressor.

The inventor has found that such damage can be eliminated by providing an inner sleeve member made of an electrical insulating material in combination with an outer shell made of the RF absorbing material. Thus, unlike the known magnetron RF suppressor, the Applicant's claimed RF suppressor has two pieces, each made from a different material. The outer shell is formed of an electromagnetic radiation-absorbing material and functions to suppress the stray RF radiation that emanates from the magnetron. The electrically insulating inner sleeve provides an insulating barrier to resist the arcing that otherwise would cause breakdown and failure of the radiation-absorbing material during high electric field transients. This novel combination of

features is neither described nor suggested by any of the text of the present application cited by the Examiner, nor is it shown in any of the drawing figures that are labeled as "Prior Art".

In a telephone interview with the Examiner on November 1, 2006, the Applicant's undersigned attorney requested that the Examiner specify which portions of the text and drawings show the features of the Applicant's claimed RF suppressor as set forth in Claim 1. However, it was not conclusively determined what text or which drawing the Examiner relied on as "admitted prior art." The Applicant's attorney pointed out that if the Examiner was relying on Figure 5 and the text in paragraphs 0011 and 0012, then the reliance was misplaced because that drawing and text describes the one-piece RF radiation suppressor.

It is well settled that in order for a reference to anticipate a claimed invention, it must describe every element of the claimed invention. MPEP §2131. The background section (pages 1-10) of the present application and the related drawings (Figures 1-6) do not describe or show an RF radiation suppressor for a magnetron that has the combination of features set forth in Claim 1. Accordingly, the alleged "admitted prior art" relied on by the Examiner fails to raise a *prima facie* case of anticipation.

Claims 2 depends from Claim 1 and thus, includes all of the features of Claim 1. Therefore, Claim 2 is novel for at least the same reasons as Claim 1.

For all of these reasons, the rejection of Claims 1 and 2 under 35 USC 102(b) is improper because it is not supported by substantial evidence of unpatentability. Therefore, the rejection should be withdrawn.

CONCLUSION

It is believed that all of the claims of this application are in condition for allowance. Accordingly, the Applicant respectfully requests that the Examiner reconsider the rejection of Claims 1 and 2 in the light of the foregoing remarks.

Respectfully submitted,

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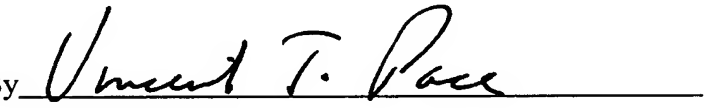
A Professional Corporation
Attorneys for Applicant

By 
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Enclosures: Drawing Replacement Sheet

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